

SEASONS

Edmonton's historical weather records, reported day by day through the year — provided for you by the gas company.

POLAR PAM 2431

POLARPAM





THE weather has an abiding interest for all of us, for few things have greater effect on our daily lives.

Believing that a compilation of long-time records would be of lasting interest to Albertans, your natural gas utility company has produced this booklet as a public service.

The information in this booklet is taken from the long-time records of the Meteorological Branch of the Department of Transport at its office in Edmonton. The Edmonton records date back to 1881, except for degree day records, which start in 1941.

It should be noted that the observations taken before about 1935 were rather crude. The observer was usually untrained, and for a very small yearly stipend, operated the weather station in his own home.

Although the modern data is more accurate, the early readings, because they were on the whole taken by very conscientious observers, have sufficient validity to be trustworthy.



DEFINITIONS

The following terms used in this booklet should be explained:

Mean or Average: All the recordings for a given period of time added together and averaged out.

Normal High and Normal Low: Long-term average of recordings for a particular day.

Precipitation: Precipitation means both rain and snow. In general, 10 inches of fresh snow is the equivalent of 1 inch of rain, but in recent years the water equivalent of snow is also measured. Precipitation is always recorded in a standard of inches of water.

Speed of Wind: Is the average speed of the wind in miles per hour during the month — not the peak gusts in storms.

Degree Days: Units for estimating the fuel requirements of buildings during the heating season. Degree days are the number of degrees by which daily mean temperatures fall below 65 degrees. One degree day is counted for each degree of deficiency for each day on which such a deficiency occurs. For example, when the mean temperature for a day is 40 degrees F, then 25 degree days of heat are required.

JANUARY

DATE	NORMAL	NORMAL	NORMAL MEAN	RECORD	YEAR	RECORD	YEAR
1	13	- 4	5	-40	1928	46	1962
2	14	- 3	5	-41	1950	45	1926
3	16	- 3	7	51	1883	50	1906
4	15	- 2	7	52	1884	48	1947
5	16	- 1	8	45	1887	47	1903
6	18	0	9	38	1886	49	1963
7	20	0	10	53	1886	49	1963
8	20	3	11	43	1909	48	1926
9	19	2	10	37	1909	49	1943
10	19	1	10	46	1912	42	1883
11	18	1	9	-42	1916	45	1900
12	17	0	8	46	1912	49	1891
13	17	0	8	52	1910	49	1891
14	13	- 4	4	48	1950	47	1942
15	12	- 6	3	47	1896	45	1965
16	15	_ 5	5	42	1930	45	1884
17	15	_ 4	5	-43	1950	45	1901
18	14	- 4	5	-47	1886	48	1900
19	14	_ 4	5	57	1886	50	1944
20	15	- 4	5	48	1943	45	1942
21	15	_ 4	6	57	1886	47	1948
22	15	_ 4	6	50	1922	52	1892
23	13	 5	4	-42	1888	52	1968
24	12	- 6	3	-46	1920	46	1947
25	13	 7	3	45	1916	43	1889
26	12	_ 5	4	37	1886	47	1934
27	14	- 4	5	49	1929	57	1889
28	14	- 5	5	44	1893	53	1941
29	14	- 4	5	-46	1887	55	1931
30	15	- 2	6	46	1893	53	1931
31	14	- 4	5	45	1893	50	1906



JANUARY WEATHER RECORDS

Coldest January on record (mean average)	—18.0° F	1950
Warmest January on record (mean	10.0	1330
average)	22.3° F	1931
Average January temperature	6.6° F	
Normal degree days for January	1,810	
Greatest number of degree days for		
January	2,573	1950
Fewest number of degree days for January	1,314	1942
Lowest January temperature recorded	—57° F	1886
Highest January temperature recorded	57° F	1889
Normal precipitation for January	0.95 inches	
Greatest amount of precipitation for		
January	2.50 inches	
Least amount of precipitation for January	Trace	1931
Average amount of sunshine for January	86.2 hours	
Average speed of wind	7.8 mph p	revail-
	ing from	South

FEBRUARY

DATE	NORMAL HIGH	NORMAL LOW	NORMAL MEAN	RECORD	YEAR	RECORD	YEAR
1	17	_ 4	7	50	1917	53	1935
2	17	— 2	8	50	1883	50	1959
3	16	- 1	8	57	1893	49	1954
4	17	1	9	-41	1887	48	1933
5	19	1	10	-41	1907	54	1886
6	19	- 1	9	38	1887	54	1886
7	18	- 1	9	-41	1936	56	1954
8	19	— 1	9	51	1939	57	1954
9	20	1	10	-42	1885	50	1928
10	20	2	11	45	1884	50	1889
11	21	2	11	36	1887	50	1934
12	21	2	12	—38	1936	55	1901
13	19	1	10	39	1909	52	1934
14	18	- 1	9	-41	1904	51	1907
15	21	- 1	10	-44	1936	57	1916
16	21	1	11	52	1882	56	1896
17	20	1	10	52	1884	51	1888
18	20	1	10	-41	1885	54	1899
19	21	1	11	37	1884	57	1916
20	21	1	11	36	1884	56	1916
21	22	2	12	39	1910	53	1908
22	24	2	13	33	1910	53	1958
23	26	4	15	33	1940	52	1921
24	27	6	17	30	1887	54	1938
25	27	7	17	-37	1919	57	1938
26	29	8	18	33	1881	55	1926
27	29	9	19	—38	1962	62	1889
28	29	8	18	37	1962	59	1923
29	23	2	13	29	1888	54	1968



FEBRUARY WEATHER RECORDS

—17° F	1936
31.7° F	1931
11.2° F	
1,520	
2,378	1936
932	1931
—57° F	1893
62° F	1899
0.77 inches	
2.31 inches	1939
Trace	1931
118.8 hours	
8.1 mph p	
	31.7° F 11.2° F 1,520 2,378 932 —57° F 62° F 0.77 inches 2.31 inches



MARCH WEATHER RECORDS

Coldest March on record (mean average)	8.5° F	1899
Warmest March on record (mean average)	36.6° F	1910
Average March temperature	22.1° F	
Normal degree days for March	1,330	
Greatest number of degree days for		
March	1,752	1899
Fewest number of degree days for March	880	1910
Lowest March temperature recorded	—39.5° F	1888
Highest March temperature recorded	72° F	1889
Normal precipitation for March	0.83 inches	
Greatest amount of precipitation for		
March	2.76 inches	1940
Least amount of precipitation for March	0.10 inches	1915
Average amount of sunshine for March	163.1 hours	3
Average speed of wind	8.9 mph p ing from	
	_	

MARCH

DATE	NORMAL HIGH	NORMAL	NORMAL MEAN	RECORD	YEAR	RECORD	YEAR
1	28	7	18	-31	1904	58	1889
2	28	7	17	-32	1919	56	1910
3	27	5	16	-40	1888	54	1905
4	26	4	15	-38	1889	56	1937
5	27	5	16	-39	1888	60	1937
6	29	9	19	29	1932	58	1906
7	31	10	20	30	1932	60	1889
8	30	11	21	30	1951	56	1889
9	29	9	19	-26	1932	54	1944
10	29	10	19	29	1951	62	1934
11	31	10	21	31	1951	64	1934
12	29	9	19	30	1903	58	1910
13	29	9	19	25	1897	58	1910
14	30	10	20	—28	1939	65	1910
15	30	10	20	—17	1939	62	1910
16	32	12	22	—28	1939	62	1910
17	35	13	24	21	1939	61	1910
18	36	15	26	—16	1882	63	1930
19	37	16	26	—16	1882	65	1928
20	37	16	27	32	1882	65	1929
21	38	17	28	—21	1882	67	1910
22	38	19	28	—17	1904	70	1889
23	37	18	27	20	1904	72	1889
24	36	17	26	—22	1904	56	1011
25	35	15	25	26	1898	60	1910
26	37	15	26	—19	1899	60	1938
27	37	17	27	—12	1898	57	1930
28	38	19	29	 5	1899	63	1930
29	39	19	29	_ 4	1932	63	1966
30	39	21	30	- 3	1924	62	1964
31	41	22	31	—10	1936	69	1942

WHAT DOES THE FORECASTER MEAN?

- By "light winds" he means winds are expected to stay below 15 miles an hour.
- By "cooler", "warmer", etc. he refers to yesterday's temperatures as a basis for comparison.
- By "sunny", "clear", or "few clouds", he means the skies will be less than half-covered by clouds.
- By "cloudy", or "overcast" he means the skies will be more than half-covered by clouds.
- By "variable cloudiness", or "changeable skies", frequent changes between clear and cloudy conditions are indicated.
- By "scattered showers", the forecaster predicts rain in some parts of the region, but it is impossible to say exactly where the showers will occur.
- By "risk of (freezing rain, frost, thunderstorms)" the fore-caster indicates there is less than a 50 50 chance of occurrence.

HIGH PRESSURE OR LOW PRESSURE?

Weather changes are usually related to changes in the weight of the air overhead. The high-pressure areas and low-pressure areas on a weather map are indications of this weight of the air. In general these pressure areas move from west to east in Canada, accounting for the fact that our weather usually moves from west to east. The weather associated with high-pressure areas is usually fine, while low-pressure weather is often stormy.

IS LIGHTNING REALLY DANGEROUS?

Many believe that animals draw lightning and that open windows and doors invite lightning to come inside. Others say it never strikes twice in the same place and you're safe if you stay where lightning struck once before.

Although people do continue to be struck by lightning occasionally, such an accident is actually quite rare. In Canada the chances are only one in a million of being in the path of a lightning stroke, while the odds of being in an auto accident and not living through it are 200 times greater. Actually, the bark of the thunderstorm is worse than its bite, for nine out of ten lightning discharges go from cloud to cloud or between parts of the same cloud and never reach the earth at all, and most of those that do strike the ground cause little or no harm or damage.

- Closing windows and doors will keep out the rain, but otherwise has practically no effect on lightning.
- Lightning often strikes the same place more than once. The Empire State Building has been struck nine times in 20 minutes.
- A tree is a good target for lightning discharge, and you could be right in the path. Animals are sometimes killed when they huddle under isolated trees for shelter.
- Your all-steel automobile will safely protect you but if the rain is heavy you might be well advised to stop, and drive on when the visibility is better.
- Thunder is just the sound of lightning discharge it can't hurt you. One lightning expert puts it this way "If you heard thunder, the lightning didn't strike you. If you saw the lightning, it missed you; and if it did strike you, you don't know it now."

APRIL

DATE	NORMAL HIGH	NORMAL	NORMAL MEAN	RECORD	YEAR	RECORD	YEAR
1	42	22	32	-13	1936	70	1906
2	43	23	33	14	1954	69	1930
3	43	23	33	 6	1899	71	1944
4	45	23	34	 15	1920	69	1889
5	45	25	35	11	1949	72	1905
6	44	24	34	10	1949	69	1955
7	47	24	36	—12	1948	73	1889
8	48	26	37	7	1948	74	1889
9	49	27	38	6	1940	70	1886
10	48	27	38	— 8	1940	75	1949
11	49	27	38	4	1940	74	1913
12	52	28	40	1	1909	80	1913
13	51	28	40	8	1953	78	1913
14	52	29	40	 4	1935	79	1926
1.5	51	29	40	6	1894	75	1906
16	52	28	40	6	1896	82	1923
17	51	29	40	3	1890	80	1923
18	52	29	41	2	1890	77	1910
19	55	29	42	6	1927	77	1943
20	54	32	43	6	1927	80	1934
21	54	31	42	12	1951	80	1942
22	54	31	42	16	1918	78	1891
23	55	31	43	16	1909	81	1910
24	55	32	44	14	1959	84	1905
25	56	32	44	8	1945	85	1898
26	56	32	44	4	1956	79	1923
27	56	32	44	8	1907	80	1934
28	57	32	44	11	1954	85	1939
29	58	33	46	6	1909	88	1939
30	58	34	46	9	1909	82	1941



APRIL WEATHER RECORDS

Coldest April on record (mean average) Warmest April on record (mean average) Average April temperature Normal degree days for April	26.8° F 1954 48.8° F 1906 39.5° F 765
Greatest number of degree days for April Fewest number of degree days for April Lowest April temperature recorded	1,159 1954 486 1906 —15° F 1911
Highest April temperature recorded Normal precipitation for April Greatest amount of precipitation for April	1920 87.7° F 1939 1.10 inches 3.47 inches 1955
Least amount of precipitation for April Average amount of sunshine for April Average speed of wind	0.01 inches 1905 221 hours 10.4 mph prevailing from S

WHAT IS A GALE?

Gale, fresh breeze, storm, hurricane . . . all of these winds are measured on a scale of velocities developed by the British admiral, Sir Francis Beaufort (1774 - 1859).

On the scale he developed, and known as the Beaufort scale, each type has its own number, as follows:

Beaufort Number	General Description	Specifications for Estimating velocities	Wind Speed in m.p.h. at 30 ft. above ground
0	Calm	Smoke rises vertically	Less than 1
1	Light air	Smoke, but not wind vanes, shows direction of wind	1 - 3
2	Light breeze	Wind felt on face; leaves rustle; wind vanes moved	4 - 7
3	Gentle breeze	Leaves and small twigs moving constantly; small flags extended	8 - 12
4	Moderate breeze	Dust and loose paper raised; small branches moved	13 - 18
5	Fresh breeze	Small leafy trees swayed	19 - 24
6	Strong breeze	Large branches in motion; whistling heard in telegraph wires	25 - 31
7	Near gale	Whole trees in motion	32 - 38
8	Gale	Breaks twigs off trees	39 - 46
9	Strong gale	Slight structural damage occurs	47 - 54
10	Storm	Trees uprooted; considerable structural damage	55 - 63
11	Violent Storm	Very rare; widespread damage	64 - 72
12	Hurricane	Very rare	Above 72

EDMONTON FACTS

First Records Kept 1881

Height from sea level of weather office 2,200 feet
Climate Cold temperate
Average precipitation . 18.64 inches (5.38 inches equivalent is snow)
Yearly mean temperature 36.9 F
Peak minimum temperature —57° January 1886 February 1893
Peak maximum temperature 99° F June, 1937
Average annual degree days 10,268
Yearly average hours of sunshine 2,201.8
Daily average of sunshine 6 hours
Yearly average of wind speed 8.9 mph



	NORMAL	NORMAL	NORMAL	RECORD		RECORD	
DATE	<u>нісн</u> 58	Low	46	LOW 14	1910	80	1931
	58	34	46	11	1899	78	1937
2		35	47	11	1899		
3	59					82	1945
4	60	35	48	20	1886	82	1944
5	60	36	48	15	1906	83	1911
6	61	36	48	19	1919	83	1966
7	61	36	48	15	1885	85	1953
8	61	36	49	20	1945	79	1920
9	61	36	48	21	1946	80	1932
10	61	37	49	21	1946	79	1940
11	. 62	37	50	25	1944	82	1949
12	63	36	50	15	1899	79	1950
13	64	38	51	20	1886	84	1912
14	65	39	52	24	1923	88	1924
15	64	39	51	10	1942	86	1934
16	65	40	52	18	1942	85	1959
17	63	40	52	25	1888	83	1886
18	63	40	52	25	1918	87	1925
19	64	40	52	19	1924	86	1919
20	66	41	53	21	1888	86	1897
21	67	42	54	25	1918	89	1928
22	66	41	54	22	1888	88	1928
23	68	41	54	25	1949	88	1886
24	67	42	55	24	1911	85	1940
25	67	42	55	30	1922	90	1934
26	68	44	56	32	1926	88	1928
27	68	42	55	27	1947	94	1936
28	67	42	55	28	1947	92	1936
29	67	43	55	26	1942	90	1936
30	67	43	55	24	1917	87	1894
31	66	44	55	30	1883	90	1903
		**	00	00	1000	30	2000



MAY WEATHER RECORDS

Coldest May on record (mean average)	43.6° F	1907
Warmest May on record (mean average)	57.3° F	1936
Average May temperature	52.1° F	
Normal degree days for May	400	
Greatest number of degree days for May	663	1907
Fewest number of degree days for May	256	1958
Lowest May temperature recorded	10.1° F	1942
Highest May temperature recorded	94° F	1936
Normal precipitation for May	1.83 inche	S
Greatest amount of precipitation for May	7.67 inches	1902
Least amount of precipitation for May	0.10 inches	1968
Average amount of sunshine for May	266.6 hour	S
Average speed of wind	10.5 mph p	

JUNE

DATE	NORMAL	NORMAL	NORMAL	RECORD	YEAR	RECORD	YEAR
1	66	43	54	25	1883	86	1922
2	67	43	55	30	1939	88	1961
3	68	43	56	27	1887	90	1961
4	68	43	56	25	1887	93	1961
5	67	44	56	26	1887	92	1961
6	68	44	56	25	1887	90	1961
7	68	44	56	28	1922	90	1930
8	68	45	56	32	1895	86	1929
9	69	44	57	29	1924	87	1913
10	69	45	57	30	1926	86	1923
11	70	46	58	34	1933	94	1910
12	70	46	58	33	1969	88	1912
13	69	45	57	26	1898	88	1933
14	69	46	58	32	1915	90	1933
15	70	47	58	34	1915	87	1961
16	70	47	59	38	1893	87	1885
17	69	47	58	35	1932	87	1969
18	69	46	58	32	1902	89	1898
19	70	47	58	33	1924	94	1898
20	70	47	58	30	1931	89	1919
21	70	46	58	32	1942	89	1889
22	70	47	59	31	1924	87	1919
23	69	47	58	34	1905	92	1936
24	70	47	58	29	1905	86	1936
25	70	48	59	28	1887	86	1912
26	71	48	60	36	1949	89	1926
27	72	48	60	37	1951	90	1936
28	72	48	60	36	1947	90	1937
29	72	49	60	38	1909	99	1937
30	71	49	60	32	1884	88	1896



JUNE WEATHER RECORDS

Coldest June on record (mean average)	52.4° F 1902
Warmest June on record (mean average)	65.7° F 1961
Average June temperature	57.8° F
Normal degree days for June	222
Greatest number of degree days for June	378 1902
Fewest number of degree days for June	73 (1961)
Lowest June temperature recorded	25° F 1883
Highest June temperature recorded	99.0° F 1937
Normal precipitation for June	3.15 inches
Greatest amount of precipitation for June	8.53 inches 1914
Least amount of precipitation for June	0.45 inches 1949
Average amount of sunshine for June	251.2 hours
Average speed of wind	9.8 mph prevail- from NW



JULY

JULY WEATHER RECORDS

Coldest July on record (mean average)	57.8° F 1887
Warmest July on record (mean average)	66.4° F 1960
Average July temperature	6 3.1° F
Normal degree days for July	74
Greatest number of degree days for July	218 1887
Fewest number of degree days for July	49 1947
Lowest July temperature recorded	29° F 1918
Highest July temperature recorded	98° F 1924
Normal precipitation for July	3.34 inches
Greatest amount of precipitation for July	11.13 inches 1901
Least amount of precipitation for July	1.28 inches 1939
Average amount of sunshine for July	305.2 hours
Average speed of wind	8.8 mph prevail-
	ing from NW

DATE	NORMAL HIGH	NORMAL	NORMAL MEAN	RECORD	YEAR	RECORD	YEAR
1	72	49	61	31	1919	96	1924
2	73	49	61	35	1884	98	1924
3	73	50	61	34	1915	95	1924
4	73	50	62	34	1884	89	1896
5	73	50	62	38	1934	92	1896
6	73	51	62	39	1925	90	1926
7	73	50	62	39	1925	90	1960
8	73	49	61	35	1890	90	1964
9	74	51	62	39	1938	89	1964
10	75	51	63	37	1885	88	1899
11	74	57	63	36	1887	88	1939
12	75	50	63	37	1887	91	1964
13	73	50	61	34	1884	92	1945
14	74	51	63	35	1912	94	1961
15	74	51	63	38	1887	94	1935
16	74	51	62	38	1936	91	1941
17	75	50	63	36	1895	93	1920
18	76	51	64	35	1885	94	1941
19	75	51	63	33	1885	87	1921
20	75	51	63	39	1904	93	1936
21	75	51	63	39	1887	91	1945
22	77	52	64	37	1889	94	1904
23	75	51	63	33	1946	92	1959
24	75	50	62	29	1918	90	1926
25	74	51	63	38	1918	91	1933
26	74	50	62	37	1918	92	1933
27	74	50	62	35	1883	88	1939
28	74	50	62	38	1887	87	1939
29	73	50	62	40	1914	90	1934
30	75	50	62	38	1888	90	1939
31	74	50	52	38	1927	88	1922

AUGUST

DATE	NORMAL HIGH	LOW	NORMAL MEAN	LOW	YEAR	RECORD HIGH	YEAR
1	74	50	62	33	1941	92	1922
2	75	50	62	36	1886	93	1922
3 .	75	51	63	35	1923	87	1939
4	74	51	62	38	1923	90	1939
5	73	50	61	38	1938	91	1896
6	73	49	61	35	1919	87	1963
7	73	49	61	36	1909	90	1906
8	73	49	61	26	1887	89	1932
9	73	49	61	36	1887	94	1932
10	73	48	61	32	1916	92	1928
11	74	49	61	35	1916	90	1939
12	73	49	61	34	1916	86	1935
13	72	49	61	30	1884	90	1933
14	73	48	60	34	1884	88	1939
15	72	49	61	33	1884	90	1961
16	71	47	59	28	1884	89	1958
17	73	48	60	34	1940	89	1932
18	72	48	60	33	1950	96	1933
19	72	48	60	31	1907	89	1897
20	73	47	60	34	1928	88	1967
21	72	47	59	31	1908	89	1894
22	71	47	59	31	1884	86	1946
23	70	47	58	32	1934	87	1946
24	70	47	58	29	1934	83	1927
25	69	46	57	31	1880	87	1966
26	68	46	57	34	1935	84	1932
27	69	45	57	30	1928	88	1934
28	68	45	57	29	1909	89	1933
29	69	45	57	30	1909	85	1915
30	68	45	57	32	1886	90	1940
31	68	45	57	31	1932	90	1940



AUGUST WEATHER RECORDS

Coldest August on record (mean average)	55.9° F	1907
Warmest August on record (mean		
average)	66.2° F	1967
Average August temperature	60° F	
Normal degree days for August	180	
Greatest number of degree days for		
August	280	1959
Fewest number of degree days for		
August	48	1961
Lowest August temperature recorded	26° F	1887
Highest August temperature recorded	96° F	1933
Normal precipitation for August	2.55 inches	5
Greatest amount of precipitation for		
August	6.44 inches	1966
Least amount of precipitation for August	0.03 inches	1939
Average amount of sunshine for August	268.5 hour	S
Average speed of wind	38.4 mph p	



SEPTEMBER WEATHER RECORDS

Coldest September on record (mean average)	41.7° F	1926
Warmest September on record (mean average)	60.8° F	1967
Average September temperature	51.5° F	
Normal degree days for September	411	
Greatest number of degree days for		
September	699	1926
Fewest number of degree days for		
September	203	1964
Lowest September temperature recorded	11° F	1951
Highest September temperature recorded	92.5° F	1967
Normal precipitation for September	1.35 inches	;
Greatest amount of precipitation	4.32 inches	1901
Least amount of precipitation for		
September	0.03 inches	1967
Average amount of sunshine for		
September	186.3 hours	5
Average speed of wind	9.0 mph p	

SEPTEMBER

DATE	NORMAL HIGH	NORMAL LOW	NORMAL MEAN	RECORD	YEAR	RECORD HIGH	YEAR
1	67	43	55	31	1918	93	1967
2	66	43	55	28	1919	83	1946
3	66	43	55	30	1935	88	1950
4	66	43	54	16	1885	86	1938
5	66	42	54	19	1885	87	1967
6	66	42	54	26	1885	88	1934
7	64	42	53	28	1884	87	1909
8	64	41	53	25	1895	85	1923
9	65	40	52	27	1910	84	1963
10	64	40	52	23	1890	84	1944
11	63	40	51	19	1921	83	1944
12	64	40	52	20	1915	85	1944
13	63	39	51	21	1915	84	1923
14	63	40	51	24	1915	82	1923
15	62	39	51	24	1884	83	1967
16	62	38	50	23	1886	84	1938
17	63	38	51	19	1886	84	1938
18	62	39	51	17	1893	83	1889
19	62	38	50	18	1893	85	1889_
20	62	38	50	23	1934	85	1922
21	61	37	49	19	1887	87	1967_
22	60	37	48	20	1926	88	1950
23	59	36	47	15	1934	86	1950
24	58	35	47	18	1893	80	1909
25	58	35	47	12	1900	87	1952
26	60	35	48	12	1908	86	1897
27	59	36	48	11	1951	85	1967
28	60	35	47	20	1929	86	1887
29	60	36	48	13	1883	84	1890
30	60	35	47	14	1883	77	1957

WHAT IS A TORNADO?

Sometimes called a "twister" or a "cyclone", a tornado is a violent local vortex in the atmosphere. It has a funnel-shaped cloud with upward spiralling winds of terrific velocity. Wind speeds in the vortex have never been measured, but have been estimated as high as 500 miles an hour. The tornado itself moves about 45 miles an hour. In area the tornado is one of the least extensive of all storms, being only about 100 yards across, but in violence it is the world's most severe. They are frequent in the United States, and occasionally occur in Canada. In this country they have occurred chiefly in Southern Ontario. About two per year have been reported in each of the three Prairie Provinces.

The destructive effects of a tornado are terrifying. Strong buildings are torn apart; large trees are uprooted; people and farm animals are whirled through the air; bridges are wrenched from their foundations. Reduced air pressure within the funnel-shaped cloud causes buildings literally to explode when the storm passes overhead. There is often a surprisingly sharp line dividing the area of almost complete destruction from the adjacent area of little damage.

The safest place during a tornado is a well-built "cyclone cellar", but if such is not available the southwest corner of a frame building affords a measure of safety. If the tornado is seen and its direction noted, it is possible to keep out of its way by fleeing at right angles to its direction. Since they usually move from southwest to northeast, escape is most likely to the northwest or to the southeast.



SNOWFALL

Snowfall is usually measured with a ruler graduated in tenths of an inch. Several measurements are made and the average taken, in order to overcome the problem of drifts. Specially constructed snow gauges are used to measure the water equivalent of snow.

Ten inches of freshly fallen snow are considered to be the equivalent of one inch of rain. Melt some snow to see how accurate this assumption is. You will probably find that it varies a great deal with the type of snow.

When fresh snow has fallen on old snow, scrape a hole until you can see the line dividing the two types, then measure the new fall.

OCTOBER

DATE	NORMAL HIGH	NORMAL	NORMAL MEAN	RECORD	YEAR	RECORD HIGH	YEAR
1	58	36	47	15	1925	78	1913
2	57	35	46	13	1883	82	1943
3	57	34	45	18	1881	81	1921
4	57	34	46	18	1952	82	1892
5	56	35	45	19	1954	79	1899
6	57	33	45	16	1898	80	1889
7	57	34	45	16	1927	81	1943
8	56	32	44	11	1897	78	1951
9	55	32	44	11	1881	80	1934
10	55	32	44	9	1919	82	1942
11	55	32	44	3	1909	76	1944
12	55	32	43	10	1959	81	1964
13	56	33	44	7	1881	8.0	1964
14	54	33	44	12	1886	83	1945
15	53	31	42	10	1886	81	1945
16	52	29	41	7	1886	80	1929
17	52	30	41	10	1881	73	1903
18	51	29	40	4	1905	74	1903
19	50	29	40	- 8	1930	73	1938
20	51	29	40	_ 4	1930	78	1940
21	50	29	40	2	1951	74	1901
22	48	28	38	2	1893	76	1907
23	49	27	38	2	1887	76	1937
24	48	27	38	10	1887	71	1966
25	48	27	37	 15	1919	73	1947
26	48	27	37	 13	1939	70	1904
27	46	26	36	— 5	1939	69	1903
28	45	26	36	4	1925	71	1953
29	45	26	35	0	1925	74	1887
30	45	26	35	- 1	1919	71	1890
31	43	25	34	5	1919	67	1958



OCTOBER WEATHER RECORDS

Coldest October on record (mean		
average)	29.1° F	1919
Warmest October on record (mean		
average)	48.1° F	1915
Average October temperature	41.2° F	
Normal degree days for October	738	
Greatest number of degree days for		
October	1,113	1919
Fewest number of degree days for October	524	1915
Lowest October temperature recorded	—15° F	1919
Highest October temperature recorded	83.1° F	1945
Normal precipitation for October	0.90 inches	
Greatest amount of precipitation for		
October	2.28 inches	1919
Least amount of precipitation for October	0.06	1895
Average amount of sunshine for October	157 hours	
Average speed of wind	8.9 mph p	

NOVEMBER

DATE	NORMAL HIGH	NORMAL	NORMAL MEAN	RECORD	YEAR	RECORD	YEAR
1	44	24	34	- 4	1951	74	1931
2 .	42	24	33	 7	1935	71	1949
3	42	23	32	 9	1919	68	1949
4	42	23	32	11	1919	66	1949
5	40	23	32	 6	1936	67	1949
6	38	21	30	23	1919	63	1923
7	38	20	29	 5	1902	59	1949
8	37	20	28	21	1902	64	1929
9	36	19	27	—17	1924	59	1905
10	34	19	27	—22	1940	62	1905
11	33	17	25	—27	1940	62	1900
12	33	16	25	24	1940	65	1905
13	33	16	24	25	1883	62	1905
14	32	17	24	24	1911	58	1880
15	32	16	24	17	1931	55	1895
16	31	14	23	28	1896	65	1895
17	30	13	22	 37	1896	55	1904
18	29	13	21	30	1896	65	1917
19	30	14	22	34	1896	63	1917
20	28	14	21	30	1896	59	1917
21	28	11	20	30	1927	57	1930
22	29	13	21	28	1886	60	1930
23	30	13	22	20	1950	58	1890
24	29	14	21	24	1892	55	1930
25	28	12	20	36	1883	54	1890
26	27	11	19	44	1883	54	1936
27	27	11	19	43	1883	50	1936
28	28	10	19	28	1887	56	1956
29	27	11	19	33	1896	55	1956
30	26	10	18	39	1919	57	1885



NOVEMBER WEATHER RECORDS

Coldest Novemb average)	er on record (mean	0.4° F	1896
Warmest Novem average)	ber on record (mean	39.5° F	1917
Average Novem	ber temperature	24.5° F	
Normal degree	days for November	1,215	
	r of degree days for	1,962	1896
Fewest number November	of degree days for	765	1917
Lowest Novemb	er temperature recorded	—44° F	1883
Highest Noveml	per temperature recorded	74° F	1931
Normal precipita	ation for November	0.88 inches	
	t of precipitation for	3.57 inches	1906
Least amount o November	f precipitation for	0.01	1881
Average amount November	of sunshine for	100.1 hours	S
Average speed	of wind	8.2 mph p ing from	

DECEMBER

DATE	NORMAL HIGH	NORMAL	NORMAL MEAN	RECORD	YEAR	RECORD HIGH	YEAR	
1	24	9	17	-31	1919	55	1884	
2	26	9	17	27	1880	58	1941	
3	26	10	18	25	1928	55	1884	
4	25	10	18	47	1880	59	1907	
5	26	8	17	43	1880	61	1939	
6	24	8	16	43	1882	50	1925	
7	24	8	16	37	1927	51	1925	
8	23	7	15	36	1902	47	1925	
9	22	7	14	30	1935	51	1913	
10	22	6	14	—29	1922	60	1913	
11	21	5	13	34	1917	45	1959	
12	22	5	13	-42	1917	51	1880	
13	22	5	14	27	1929	44	1952	
14	23	6	15	43	1882	52	1952	
15	23	7	15	36	1897	46	1962	
16	23	6	14	—43	1924	49	1882	
17	23	6	14	45	1924	52	1954	
18	24	5	15	—39	1924	53	1954	
19	23	8	15	37	1921	55	1919	
20	23	7	15	29	1921	48	1938	
21	22	5	14	38	1884	49	1899	
22	21	5	13	40	1892	53	1899	
23	19	4	12	43	1884	52	1928	
24	19	3	11	43	1880	46	1953	
25	17	2	9	39	1880	47	1903	
26	18	2	10	-34	1904	46	1956	
27	17	1	9	-42	1917	45	1956	
28	18	1	10	55	1938	51	1956	
29	17	0	8	47	1938	50	1901	
30	14	0	7	-44	1884	45	1963	
31	15	— 3	6	45	1884	49	1963	



DECEMBER WEATHER RECORDS

Coldest December on record (mean average)	—9.7° F	1933
Warmest December on record (mean average)	26.8° F	1959
Average December temperature	13.3° F	
Normal degree days for December	1,603	
Greatest number of degree days for December	2,316	1933
Fewest number of degree days for December	1,200	1959
Lowest December temperature recorded	—55.2° F	
Highest December temperature recorded	61.4° F	1939
Normal precipitation for December	0.99 inches	
Greatest amount of precipitation for December	2.85 inches	1933
Least amount of precipitation for December	0.07 inches	1905
Average amount of sunshine for December	77.8 hours	
Average speed of wind	7.7 mph p ing from	

WEATHER NOTES

	Day	Year	Day	Year	Day	Year	Day	Year		Day	Year	Day	Year	Day	Year	Dans	V.
HIGH TEMPERATURE									HIGH TEMPERATURE			Zuj	rear	Duy	1 eqt	Day	Year
LOW TEMPERATURE									LOW TEMPERATURE								
STRONG WINDS									STRONG WINDS								
PRECIPITATION									PRECIPITATION								
SEVERE STORMS									SEVERE STORMS								
HAIL									HAIL								
UNUSUAL WEATHER									UNUSUAL WEATHER								
HIGH TEMPERATURE									HIGH TEMPERATURE								
LOW TEMPERATURE									LOW TEMPERATURE								
STRONG WINDS									STRONG WINDS								
PRECIPITATION									PRECIPITATION								
SEVERE STORMS									SEVERE STORMS								
HAIL									HAIL								
UNUSUAL WEATHER									UNUSUAL WEATHER								
HIGH TEMPERATURE									HIGH TEMPERATURE								
LOW TEMPERATURE									LOW TEMPERATURE								
STRONG WINDS									STRONG WINDS								
PRECIPITATION			7						PRECIPITATION								
SEVERE STORMS									SEVERE STORMS								
HAIL						1			HAIL								
UNUSUAL WEATHER									UNUSUAL WEATHER								
HIGH TEMPERATURE									HIGH TEMPERATURE								
LOW TEMPERATURE									LOW TEMPERATURE								
STRONG WINDS									STRONG WINDS								
PRECIPITATION									PRECIPITATION								
SEVERE STORMS									SEVERE STORMS								1 1
HAIL									HAIL								
UNUSUAL WEATHER									UNUSUAL WEATHER								

FOR COMPARISON

Here are average daily low and high temperatures at selected points across Canada.

	-											
Newfoundland Corner Brook Gander Torbay	JAN L H 12 27 12 26 18 30	FEB L H 9 25 11 26 17 30	MAR L H 17 33 17 31 22 33	APR L H 28 42 26 40 28 40	MAY L H 35 53 35 53 34 51	JUNE L H 43 64 43 62 41 58	JULY L H 53 73 52 72 51 68	AUG L H 52 71 52 70 53 68	SEPT L H 46 63 46 62 47 62	OCT L H 37 52 37 51 39 52	NOV L H 29 41 28 40 32 44	DEC L H 21 32 19 31 23 34
Prince Edward Island Charlottetown	11 26	10 25	20 34	30 44	40 57	50 67	59 74	58 74	51 66	42 55	32 43	19 31
Nova Scotia Halifax Sydney	17 32 15 30	16 31 11 28	24 38 20 35	32 47 29 44	41 58 37 56	49 67 46 67	56 74 55 75	57 73 56 74	51 67 50 66	43 57 41 56	34 47 33 45	23 36 23 35
New Brunswick Fredericton Moncton Saint John	4 24 7 25 12 28	4 26 8 27 12 28	17 37 19 35 22 37	29 49 29 46 32 46	39 63 39 61 41 57	49 72 47 69 48 65	55 78 55 77 54 70	54 76 53 76 55 70	46 68 46 68 49 64	36 56 37 56 41 55	26 42 28 43 31 44	11 28 14 30 17 32
Quebec Gaspe Montreal Quebec	2 20 8 23 5 19	1 21 9 24 6 21	13 31 21 35 18 32	26 41 34 50 31 45	36 53 47 64 43 61	46 67 57 74 53 72	54 76 62 79 59 77	49 73 60 76 57 74	43 66 52 67 49 65	34 54 41 55 39 52	23 38 30 41 27 37	9 25 15 27 12 24
Ontario Kenora Ottawa Peterborough Port Arthur Toronto	-7 10 3 21 8 27 -2 17 18 31	-3 15 3 22 8 28 0 20 17 31	10 29 17 34 19 38 12 31 25 39	27 46 31 50 32 53 26 45 36 52	41 62 43 65 43 66 37 58 46 65	51 71 53 75 53 76 47 68 56 75	57 78 58 80 57 81 52 74 61 81	55 74 55 78 56 79 51 72 60 78	46 63 48 69 48 71 44 63 53 71	35 49 37 55 37 59 34 51 42 58	17 28 26 40 27 44 20 34 33 45	-1 14 10 25 14 31 6 22 23 34
Manitoba Churchill The Pas Winnipeg	-24 -9 -16 3 -8 9	-23 -8 -12 10 -5 14	-12 4 1 25 9 28	4 21 21 44 28 48	22 37 36 60 41 64	34 50 46 69 51 73	46 64 53 76 57 80	46 60 50 73 54 78	38 49 40 61 45 66	25 34 29 47 34 52	1 12 9 25 16 30	16 —3 —8 9 1 15
Saskatchewan Prince Albert Regina Swift Current	-11 9 -7 12 0 19	-7 14 -5 16 3 22	5 28 9 29 15 34	26 48 ¹ 27 50 29 52	38 64 38 66 39 66	47 71 47 73 48 72	53 77 52 81 53 81	50 74 49 78 50 78	40 63 39 67 41 67	30 50 29 53 32 55	12 28 13 31 17 35	-5 14 0 18 6 24
Alberta Banff Calgary Edmonton Jasper Lethbridge	4 22 4 24 —2 15 4 22 8 28	7 29 6 27 2 20 8 30 9 30	15 38 15 34 13 31 17 39 19 39	25 49 27 49 29 50 26 51 30 54	33 59 38 61 41 64 34 61 39 65	39 65 44 66 47 69 41 68 47 70	43 73 49 75 52 74 45 74 51 80	41 71 46 72 49 71 43 71 49 77	35 61 40 63 40 63 37 63 41 66	29 50 30 53 31 52 30 51 33 57	17 34 18 38 17 32 18 35 20 41	8 24 10 30 6 21 8 24 12 32
British Columbia Kamloops Nelson Vancouver Victoria	17 28 19 30 33 42 36 43	21 35 21 36 34 46 37 46	30 49 28 46 37 51 40 50	38 62 35 58 42 58 43 56	46 72 41 68 47 65 47 61	53 78 47 73 52 70 50 65	57 84 51 83 55 74 52 68	55 82 50 81 54 74 52 68	47 71 44 69 50 67 50 65	38 57 37 55 45 58 46 57	30 41 30 40 39 49 41 49	22 32 24 33 35 44 38 45
Yukon Territory Dawson City Whitehorse	-23 -9 3 13	—19 —4 —2 16	-6 18 12 31	16 41 22 41	34 59 34 57	44 71 43 67	47. 73 45 67	43 67 43 65	33 53 37 55	21 34 28 41	-4 8 8 21	—19 —7 —4 11
Northwest Territories Hay River Yellowknife	-21 -2 -26-10	—19 2 —24 —6	-8 14 11 10	12 33 7 29	30 50 31 49	41 61 44 61	50 70 52 70	47 67 50 65	38 55 39 52	26 41 26 36	3 17 0 14	-16 3 -21 -6





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